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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/751,491	01/07/2004	Keith W. Jones	AFD 602	5435
26902 7590 06/23/2009 DEPARTMENT OF THE AIR FORCE AFMC LO/JAZ BLdg 11, Room D18 WRIGHT-PATTERSON AFB, OH 45433-7109				
EXAMINER MONIKANG, GEORGE C				
ART UNIT		PAPER NUMBER		
2614				
MAIL DATE		DELIVERY MODE		
06/23/2009		PAPER		

**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

# Office Action Summary

**Application No.**

10/751,491

**Applicant(s)**

JONES ET AL.

**Examiner**

GEORGE C. MONIKANG

**Art Unit**

2614

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --  
**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 18 February 2009.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-16 is/are pending in the application.
- 4a) Of the above claim(s) 2, 4, 8, 10, 13 and 14 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1, 3, 5-7, 9, 11, 12, 15-16 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some \* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
  2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB/08)  
Paper No(s)/Mail Date \_\_\_\_\_
- 4) ☐ Interview Summary (PTO-413)  
Paper No(s)/Mail Date \_\_\_\_\_
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: \_\_\_\_\_

**DETAILED ACTION**

***Continued Examination Under 37 CFR 1.114***

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 4/17/2009 has been entered.

***Response to Arguments***

2. Applicant's arguments filed 2/18/2009 have been fully considered but they are not persuasive.
3. With respect to applicant's arguments that the Pfaffinger et al reference fails to disclose a plurality of programmable gain operational amplifiers, one amplifier selected at a time to have its gain changed, the examiner maintains his stand. The Pfaffinger et al reference discloses where the signals are inputted to separate adders that calculate the phase and the amplitude adjustments separately based on the coefficients of each adder over a frequency. Coefficients based on the adder units are used to affect the amplitude of the signals differently and separately, therefore, one amplitude can be adjusted and the other not adjusted based on the coefficients determined ultimately by the controller of the processor.
4. With regards to applicant's arguments that the Pfaffinger et al reference fails to disclose plurality of digital control lines are each connected to a different operational

amplifier chip select line, the examiner maintains his stand. The Pfaffinger et al reference discloses a signal processing device with amplifiers. There exists control lines within the signal processor that connect the respective signals to the corresponding amplifiers.

***Claim Rejections - 35 USC § 102***

1. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

2. Claim 1 is rejected under 35 U.S.C. 102(e) as being anticipated by Pfaffinger et al, US Patent 7,123,724 B1.

Re Claim 1, Pfaffinger et al disclose an inexpensive, programmable, frequency independent amplitude and phase shifting circuit comprising: an enclosure comprising: a plurality of signal sending digital control lines routed to an amplitude/phase shifting circuit board (*Pfaffinger et al, col. 3, lines 24-49*); and means for selecting a single amplifier for operator selected amplitude or phase gain change over a single frequency (*Pfaffinger et al, col. 2, lines 16-23: one amplifier and/or phase shifter is selected and adjusted separate from another hence there is the capability of selecting a single/one amplifier/phase shifter and the change is done over a frequency*); an amplitude/phase shifting circuit board comprising: a plurality of programmable gain operational amplifiers

(Pfaffinger et al, col. 3, lines 24-49), one amplifier selected at a time to have its gain changed when an operator desires a new amplitude or phase (Pfaffinger et al, col. 3, lines 24-49); each of said digital control lines connected to a different multiplying operational amplifier chip select line on said amplitude/phase shifting circuit board (Pfaffinger et al, col. 3, lines 24-49); and means for controlling said amplitude/phase shifting circuit (Pfaffinger et al, col. 3, lines 24-49); means for holding printing circuit boards and a front panel for receiving input and output signals (Pfaffinger et al, col. 3, lines 24-49); a motherboard comprising: means for supplying input signals through said front panel (Pfaffinger et al, col. 3, lines 24-49); a power source (Pfaffinger et al, col. 3, lines 24-49: it is inherent that the circuits need power); digital control lines; and a demultiplexer circuit board (Pfaffinger et al, col. 3, lines 24-49: it is inherent that the circuit will be on a demultiplexer circuit board); said demultiplexer circuit board within said motherboard comprising: a plurality of signal receiving digital control lines from a digital output card in a personal computer (Pfaffinger et al, col. 3, lines 24-49: it is inherent that the circuit will be on a demultiplexer circuit board); and a plurality of signal receiving digital control lines for receiving output lines from said demultiplexer (Pfaffinger et al, col. 3, lines 24-49: it is inherent that the circuit will be on a demultiplexer circuit board).

### **Claim Rejections - 35 USC § 103**

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. Claims 3, 5-6, 9, 11-12, 15-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Pfaffinger et al, US Patent 7,123,724 B1.

Re Claim 3, which further recites "Wherein said enclosure mounts onto a standard electronics rack." Pfaffinger et al fails to disclose mounting an enclosure on a standard electronic rack. Official notice is taken that both the concepts and advantages of using an electronic rack are well known in the art. It would have been obvious to use an electronic rack for the purpose of having a portable electronic device.

Re Claim 5, which further recites, "Wherein said means for controlling said amplitude/phase shifting circuit comprises a digital output card from a personal computer." Pfaffinger et al fails to disclose a digital output card from a computer. It would have been obvious to use a computer (i.e. cell phones) since computers are commonly used for signal processing.

Re Claim 6, which further recites, "Wherein said demultiplexer further comprises a 50-pin ribbon cable connector for accepting digital control lines coming from digital output card in a personal computer." Pfaffinger et al fails to disclose a 50-pin ribbon cable as claimed. Official notice is taken that both the concepts and advantages of providing a 50-pin ribbon cable are well known in the art. Thus it would have been obvious to use a 50-pin ribbon cable since they are commonly used as input output adapters.

Claims 7, 9 have been analyzed and rejected according to claim 5.

Claim 15 has been analyzed and rejected according to claims 2 & 5.

Claims 11 & 12 have been analyzed and rejected according to claims 5-6.

Claim 16 has been analyzed and rejected according to claims 1 & 5.

### **Contact**

Any inquiry concerning this communication or earlier communications from the examiner should be directed to GEORGE C. MONIKANG whose telephone number is (571)270-1190. The examiner can normally be reached on M-F. alt Fri. Off 7:30am-5:00pm (est).

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chin Vivian can be reached on 571-272-7848. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George C Monikang/  
Examiner, Art Unit 2614

6/20/2009

**/Vivian Chin/**  
**Supervisory Patent Examiner, Art Unit 2614**